

Applicant: Martin J. Dowling
Application No.: 10/735,936

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-9. (Canceled).

10. (Currently Amended) A first wireless transmit/receive unit (WTRU) capable of canceling interference from a second WTRU in a neighboring cell, the first WTRU comprising:

an antenna for receiving signals including a first signal of the first WTRU, a second signal of the second WTRU and a third signal indicating a code of the second signal;

a sampling device configured to sample the first, second and third signals from the antenna and produce a received vector;

a signal receiver for determining the second signal code using the received third signal;

an interference canceller for canceling the second signal from the received vector signals, producing an interference canceled signal; and

a data detection device having an input configured to receive the interference canceled signal for recovering ~~detecting~~ data of the first signal.

11. (Original) The first WTRU of claim 10 wherein the interference canceller includes:

- a second code generation device for producing a code of the second signal;
- a weighting device, coupled to a root mean squares (RMS) measuring device, for weighting the produced code;
- a subtractor for subtracting the weighted produced code from the received signals, producing a subtracted signal;
- the RMS measuring device for measuring a RMS of the subtracted signal; and
- a data detector having an input configured to receive the subtracted signal for detecting data of the first signal.

12. (Original) The first WTRU of claim 10 wherein the interference canceller includes;
- a second WTRU joint detector for detecting data of the second signal using the second code;
 - an interference reconstruction device for producing a contribution of the second signal to the received signals;

Applicant: Martin J. Dowling
Application No.: 10/735,936

a subtractor for subtracting the second signal contribution from the received signals, producing a subtracted signal; and

a joint detector having an input configured to receive the subtracted signal and for detecting data of the first signal.

13-15. (Canceled).